

## **ABSTRACT**

A method for manufacturing a fingerprint recognition sensor is provided. The method includes providing a CMOS sensor; depositing a transparent electrode layer as a thin film on the upper portion of the CMOS image sensor, to which a terminal of an AC power source is connected, the transparent electrode layer being made of a transparent insulating material and a transparent conductive material; forming a luminescent layer at the upper portion of the transparent electrode layer to generate a light image; forming a dielectric layer at the upper portion of the luminescent layer; and forming a contamination-resistance film at the upper portion of the dielectric layer. With this method, since the CMOS image sensor is utilized, circuit construction can be simplified. In addition, a fingerprint image having a good contrast can be obtained.